CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/KJ/W.No.14/CSR-04/317d/CEMENT/2017-18 Date: 12.04.2017

TEST REPORT ON CEMENT

*** Customer**	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Mr. K. Jagadish,** #3424, 6th cross, Gayathrinagar, Bangalore – 560 021.
*** Name of Work**	:	Improvements to roads and drains at Munikondappa Layout and Muneshwara Nagara in Bagalagunte in Bagalagunte Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
*** Reference**	:	BBMP/DZ/AEE/TDSD/PR/07/2017-18 Dated: 10.04.2017
*** Sample ID**	:	Cement - Sample 6
Sample Received on	:	10.04.2017
Period of Testing	:	10.04.2017 to 12.04.2017

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The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988 (RA-2014)	29.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	155 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	470 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988 (RA-2014)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

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VIDYARANI P.K.
Technical Manager

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Job No.: CTCE/BBMP/KJ/W.No.14/Steel/2017-18

15.04.2017

TEST REPORT ON REINFORCEMENT STEEL

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Jagadish,** #3424, 6th cross, Gayathrinagar, Bangalore – 560 021.
* Name of work	:	Improvements to roads and drains at Munikondappa Layout and Muneshwara Nagara in Bagalagunte in Bagalagunte Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/07/2017-18 Dated: 10.04.2017
* Samples ID	:	8mm Bar
Technical Reference	:	IS: 1786-2008 (RA-2013)
Date of Testing	:	15.04.2017

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Sl No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm2	Tensile strength (Ultimate stress) N/mm2	Elongation percent gauge length		
1	8	0.39	511	513	13.05	O.K	O.K

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Basaveshwaranagar, Bangalore-560 079.

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Job No.: CTCE/BBMP/KJ/W.No.14/BC/Stability/2017-18 15.05.2017

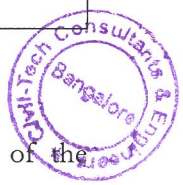
TEST REPORT ON MARSHALL STABILITY OF MIX

*** Customer**	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Mr. K. Jagadish,** #3424, 6th cross, Gayathrinagar, Bangalore – 560 021.
***Name of the Work**	:	Improvements to roads and drains at Munikondappa Layout and Muneshwara Nagara in Bagalagunte in Bagalagunte Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
***Reference**	:	BBMP/DZ/AEE/TDSD/PR/07/2017-18 Dated: 10.04.2017
*** Source**	:	Hot mix Plant, Bangalore
*** Type of Mix**	:	Bituminous Concrete
Date of Testing	:	15.05.2017

The results of the tests conducted on the Bituminous Concrete mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshall Stability, Kn	9.30	9.55	9 Kn (min)
2	Marshall flow, mm	2.55	3.20	2 – 4
3	Percent air voids in Mineral Aggregate	3.45	3.65	3 – 6
4	Voids in Compacted Mix	13.60	13.30	13 - 15
5	Percent Voids filled with Bitumen	66.55	67.75	65 - 75
6	Density, g/cc	2.27	2.28	--

*Information is furnished by the Customer/Representative.



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Job No.: CTCE/BBMP/KJ/W.No.14/GSB-I/GR/2017-18 Date 03.05.2017

TEST REPORT ON GRADATION FOR COARSE GRADED GARNULAR SUB BASE

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Jagadish,** #3424, 6th cross, Gayathrinagar, Bangalore – 560 021.
* Name of work	:	Improvements to roads and drains at Munikondappa Layout and Muneshwara Nagara in Bagalagunte in Bagalagunte Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/07/2017-18 Dated: 10.04.2017
* Sample ID	:	Coarse Graded-I
Technical Reference	:	IS : 2720 (Part - 4) 1985 (RA-2010), MORTH Table : 400-2
Date of Testing	:	03.05.2017

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Oven Dry Wt (gm) : 5000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specified Limits
75	0	0	0	100	100
26.5	1315	1315	26.30	73.70	55-75
4.75	2330	3645	72.90	27.10	10-30
0.075	1225	4870	97.40	2.60	<10
PAN	130				
Total	5000				

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* Information is furnished by the Customer/Representative

Remarks: Satisfies MORTH Specifications as per Table 400-2, Grading I

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Job No.: CTCE/BBMP/KJ/W.No.14/BC/AIV/2017-18 12.05.2017

TEST REPORT ON IMPACT VALUE OF AGGREGATES

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Jagadish,** #3424, 6th cross, Gayathrinagar, Bangalore – 560 021.
* Name of Work	:	Improvements to roads and drains at Munikondappa Layout and Muneshwara Nagara in Bagalagunte in Bagalagunte Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/07/2017-18 Dated: 10.04.2017
* Sample ID	:	Hot mix plant, Bangalore.
* Type of Mix	:	Bituminous Concrete
Technical Reference	:	IS: 2386 (Part- 4)-1963 (RA-2011)
Date of Testing	:	12.05.2017

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Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	385	383	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	90	87	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	295	296	
4	Aggregate Impact value = percent fines 100* (W2/W1) percent	23.38	22.72	**23.05**

*Information is furnished by the Customer/Representative.

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Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Concrete is 24%

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